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Upgradation of Bangladeshi Apparel firms in the Global Value Chain: Knowledge Spillover and Dynamic Capability Perspective

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Abstract

The study investigates the knowledge spill-over from TNCs to supplier-firms in the apparel industry in Bangladesh. Dynamic capability of the entrepreneurs and the absorptive capacity of the employees enable firms to upgrade their position from CMT (cut-make-trim) to ODM (own-design-manufacturer) and OBM (own-brand-manufacturer) stage in the global value chain. This is a sign to make a move from static efficiency to dynamic efficiency that ensures downstream upgradation. Using case study method on ten firms from both TNCs and supplier-firm's side the study explores four fundamental factors such as national level infrastructure and institutional support, firm level infrastructure and resources (tangible), visionary leadership, and managerial & technical efficiency that lead such upgradation in the value chain process. The study further argues that close relationship between TNCs and supplier-firms and the visionary leadership directly affect the knowledge spill-over and upgradation of supplier firms from developing country.

1. INTRODUCTION:

Gaining competitive advantage from factor endowments' (including cheap labour) drives many TNCs from Western (Porter, 1990) as well as advanced emerging economies to expand their value chain activities, mostly up-stream, to the emerging economies. This pattern of movement results in diversity of ownership, dynamic relationship and interaction, variations in knowledge spill-over and management in the value chain that eventually contributes to upgradation of the supplier firms (sector as well) as by-product of the process.

Recent internationalisation literatures focus on export activities from emerging markets through the value chain of TNCs, while upgradation of supplier firms as consequence of internationalisation is under studied. Bangladesh as the context of this study is very important, as being a member of the next-eleven emerging markets coined by Jim O'Neill of Goldman Sachs, in which the focus of the apparel sector is the best choice since it contributes more than 77% of the total export earnings of the country (BKMEA, 2011). The unique situation of this study is the export from apparel industry which is derived by the lead firms (TNCs), whereas diverse nature of relationship with the lead firms as well as different types of entrepreneurial and managerial capabilities of the local supplier firms affect the extent to which a firm can learn and absorb the knowledge from the lead firms and can upgrade, which the studies with TNC perspectives do not cover.

Bair and Gereffi (2003) in their study on upgradation of Mexican apparel firms' by North American-TNCs point to the importance of institutional contexts (local, national, and regional) that shape inter-firm networks leading to organizational learning and development. Another study by Neidik & Gereffi (2006) on Turkey's apparel industry upgradation by TNCs reveal the regulative changes that are the key drivers in which firms accumulated experiences help upgrading its position in the value chain.

In a similar study, Muller (2006) also echoed the importance of network linkages between TNCs and supplier firms which he claimed as policy driven (national and international) and is affected by the equity based relationships with TNCs that result in knowledge spillover and upgradation. All these studies have taken the TNCs perspective and emphasised on network linkages allowing knowledge spillover from TNCs to local firms for upgradation. Then this obviously raises the question: what inside the firm (supplier) affects effective knowledge spillover that possibly ensures upgradation?

However, mainstream studies focus on how knowledge spill-over takes place in various dimensions such as; from TNCs to local firms' through transactional linkages (Liu et al. 2009), knowledge spill-over from host country R&D unit to TNC Headquarter (Song, and Shin, 2008); TNCs knowledge spillover with decentralised R&Ds (Sanna-Randaccio, and Veugelers, 2007), knowledge spillover from TNC subsidiaries to local host country firms (Hallin, C and Lind, C. 2011), and TNC subsidiary's capability (sourcing and combinative) of knowledge spillover and the scale & quality of innovation (Phene, A and Almeida, P. 2008); but supplier firms' entrepreneurial perspective in emerging economies with special focus on upgradation in the value chain is merely under focused. Other than the nature and type of linkages and the degree of knowledge spill-over from one point to another (TNC to supplier or supplier to TNC), these studies do not see to what extent intra-firm entrepreneurial and resource-based capabilities as well as network linkages affect the amount of knowledge spill-over for supplier firms to upgrade its position in the global value chain. This upgradation from upstream to downstream is very important for supplier firms, not only for firm's innovation but for the industrial and the economic development of the country also.

One study by Kuada et al. (2006) on the apparel firms' upgradation in Malaysia, Vietnam and Ghana report that the type and the quality of upgradation is subjected to the extent to which supplier firms have linkages with lead firms. This study, however, do not necessarily explain what type of linkage and what intra-firm capability (as resource) makes the degree of upgradation different in those three countries, other than the explanation of the factor endowments (cheap labour, institutional supports, quota facility and industry condition) that derived upgradation. It further reveals that Malaysian firms turned them up to OBM (Own Brand Manufacturing) and ODM (Own Design Manufacturing) stage from initially CMT (Cut Make and Trim) in the Global Value Chain (GVCs). Thus the pertinent question rises; if Malaysian firms in roughly two decades (1957 to 1980) can upgrade themselves from upstream (e.g. manufacturing) to downstream activities (e.g. designing, branding) and by self initiatives can transform static efficiency into dynamic efficiency through knowledge sharing, then why Bangladeshi firms (?) are set back in the race?

Academic researchers' have paid less attention to study the upgradation of the apparel industry (Ready Made Garments) in the context of emerging country despite the amount of contribution and the value this sector earns through exporting. Other than some policy documents prepared by the Centre for Policy Dialogue (CPD)-Bangladesh, no academic study

opens up the black box that reveals the secret of upgradation of the firms in Bangladesh, which this study attempts to cover. In order to address the research gap the present study has focused on two specific research questions:

- i) How and to what extent knowledge spillover from foreign firms (lead firms) contribute to the Apparel firms' upgradation (Outsourcing/Supplier firms)?
- ii) What are the most important factors (mainly entrepreneurial) that affect qualitative upgradation of Apparel firms in Bangladesh?

The second question will lead our discussion from what to why, and how can we lead the upgradation of this industry.

In this study, we first discuss the theoretical background such as global value chain with network perspective and dynamic capability & absorptive capacity within resource based view. We then proceed to present case study of both supplier firms and lead firms. A short review of findings in line with theoretical choices is presented followed by conclusion. Finally, a direction to future research is presented followed by implications.

2. LITERATURE REVIEW

Since the focus of our study is to see the 'upgradation of the apparel (ready made garments) firms in Bangladesh, we will discuss the literatures in two dimensions, one, 'what' affects the upgradation of the RMG firms from static to dynamic efficiency, and, two, 'how' upgradation is taking place in RMG-firms having been different positions in the global value chain (GVC).

The literature review has been designed to reflect four theoretical dimensions that relate to the research questions. First two streams of literature, *GVC, Linkages & Upgradation* will be shading light on the configuration and nature of the linkages between TNCs and supplier firms and the scope of upgradation for supplier firms. The last two theoretical views, *knowledge spillover and absorptive capacity with dynamic capability*, will be adding value on how and to what extent supplier firms can gain and use knowledge from TNCs to upgrade its position.

Global Value Chain, Linkages and Upgradation:

Internationalisation of apparel industry has been studied by using the ‘global commodity chain’ (Gereffi et al. 1994; Gereffi and Memedovic, 2003), ‘global value chain’ (Gereffi et al. 2005 & Sturgeon, 2008) and the ‘global production networks’ theories (Dicken, 2003; Henderson et al. 2002), where international business linkages between firms have been explained. It was the study of garment industry that gave rise to Gereffi’s conceptualisation of the buyer-driven global value chain (GVC) where the western buyers are the lead firms for the development of the garment industries in developing countries (Kuada, Schaumburg-Muller & Sorensen, 2006). The reason of popularity of global value chain (externalization) is the development within information technology (internet, telecommunication etc.), which has made it possible to manage at a distance, to link closely and across borders and to function economic activities with autonomous companies without needing the hierarchical governance structure, and to exploit economies of scale through flexible production schemes (Sorensen, 1997).

The basic tenet in the value system’s management is operational alignment. This ensures timely, reliable and cost-effective flow of appropriate quantities and quality of inputs to other chain members. Following this line of thinking, value chain scholars argue that firms create value not only by basing the production of their products and services on their core competencies but by helping their suppliers to sustain their core competencies as well. Successful value chain management is therefore an outcome of a multiplex of economic transactions combined with varieties of organizational development strategies, knowledge flows, relationships, and institutional arrangements among stakeholders within a time-space stretch (Hansen and Kuada, 2006).

It is purposeful to characterise a linkage in relation to what part of the MNC’s value chain it deals with. Linkages can be ‘backward’ to suppliers and sub-contractors (‘upstream’) or they can be ‘forward’ to distributor’s agent, etc. (‘downstream’). To these two forms another can be added ‘horizontal’ linkages between firms operating within similar activities-e.g. between competitors and /or technology partners. Much of the literature on linkages is focused on backward linkages. However, the importance of backward linkages should not cloud the fact that significant inter-firm collaboration may also take place in downstream, to distributors and agents and eventually to customers and consumers (Hansen et al. 2006).

Governance criteria become central issue in buyer-supplier relationships while the upgradation is viewed from lead firms' perspective as they have risk of copying technology and intangible assets (e.g. designing, branding). Dicken et al. (2001) and Gereffi et al. (2005) describe that controlling in the network is determined by corresponding resource commitment (physical, political, economic, social and technological) that creates a room for supplier firms to change their status over time increasing resource commitments in the network. Tight network is perceived as an ideal network type to maintain control over suppliers as it ensures strict control over them and reduces risks of copying technology and limit access to intangible properties (Shaumburg-muller, 2006). In tight network supplier-firms are viewed as external entity and their upgradation is conceived as a reactive process which is heavily dependent on lead firms willingness. Uzzi (1997), however, argues that in the network theory forms of collaboration are not determined by economic motivations only rather *trust* is a key to such relations where 'trust' is described as either from perceived business risk in relation to confidence and expectations or a view of partners goodwill (Handfield and Bechtel, 2002: 379).

The linier model based on Gereffi's work (GVC), in which he envisages the development and upgrading of the garment industry in developing countries as a process starting with simple assembly stage (cut, make, and trim- CMT) [stage 1] after receiving order from the foreign buyer, companies upgrade to an own-equipment-manufacturing (OEM) stage [stage 2], where producers undertake more responsibilities of the production chains, including the procurement function, the quality control function, the logistics function, etc. The following stage is that of own-design-manufacturing (ODM) [stage 3] and / or own-brand-manufacturing (OBM) [stage 4] (i.e. qualitative move into design functions and the branding of products (Kuada et al, 2006). Both the stages require strong entrepreneurial and managerial leadership as well as commitment that lead a firm with distinctive competitive advantage than others in the same country.

Gereffi (1994), Porter (1990), Dicken (2003), Smakman (2003) and others have pointed at a configuration of five interdependent parameters that frame the development and upgrading in the garment industry such as (a) both local and global demand and distribution (b) location of production in search of static efficiency (cost leadership), (c) technology and competence: especially ICT, design and branding know-how, (d) the governance structure and power, (e) and finally, the national and foreign market policy.

According to Gereffi, Humphrey and Sturgeon (2005) There are five distinguished types of governance modes that TNCs tend to follow in the GVC - *the market* (buyer-supplier relation based on market price), *hierarchy* (integrated firms) and *the network*, where the network mode has three types i.e. *the modular*, *the relational* and *the captive mode*. The modular mode is found when suppliers produce for different customer specifications and asset specificity is low, as are switching costs. At times, for example, between non-producing OEMs (global contract manufacturer) and large Western buyers, we may find the relational mode of governance with close interaction between producers and buyers. The captive mode is found in networks with small suppliers, where large buyers tend to monitor and control the production more tightly without investing in the production. Some buyers, often earlier producers, may use the hierarchical mode when investing in production facilities either as fully owned subsidiaries or joint ventures with local partners (Kuada, Schaumburg-Muller & Sorensen, 2006).

Knowledge spillover , absorptive capacity and dynamic capability:

Knowledge spillover leading to inter-organizational learning is inevitable in the value chain network that occurs through formal and informal channels of communications among employees. There are many mechanisms of knowledge diffusion. Formal mechanisms among firms include training, licensing, technology partnerships, strategic alliances, and acquisitions. Informal channels of knowledge may be found in the inter-firm mobility of managers, designers and engineers (Rogers and Larsen 1984), social meetings and trade meetings (Almeida and Kogut 1994; Saxenian 1990). These external linkages provide access to the complementary assets necessary to leverage existing capabilities and information, which can increase a firm's openness to its environment and stimulate internal innovativeness (Hagedoorn 1993; Terpstra and Simonin 1993).

Teece has argued that “to be successful, innovating organizations must form linkages both in upstream and downstream, lateral and horizontal” (1992: 22), while Deeds and Hill (1996) and Shan et al. (1994), testify these arguments that revealed positive relationship between the number of a firm's strategic alliances and improvement of their competitive position. Humphrey (2004), in his policy research work for ILO suggested that learning starts by buyer –supplier interaction through knowledge spillover while supplier firms enter into the global value chains network. Dussle Peter et al. (in Humphrey, 2002) mentioned that supplier firms acquire implicit or tacit knowledge from TNCs (lead firms) which is transmitted only

through personal interaction and essentially required for their entrance into developed countries market. Knowledge spillover does not necessarily depend on sources of knowledge but the absorptive capacity of the organisation (Cohen and Levinthal, 1990), which is also dependent on the dynamic capability of the firm that makes use of the knowledge received from outside.

‘Absorptive capacity’ is defined by the ability of an organization to evaluate and assimilate external knowledge and is a function of the level of a firm’s prior or existing related knowledge (Cohen and Levinthal 1990, Zahra and George, 2002). It enables a firm to recognize valuable new information, assimilate it, and apply it to the development and refinement of dynamic capabilities. Thus the function of transformation and exploitation capability also depends on dynamic leadership, the structure, and the management of the firm.

Dynamic capability concept has been enhanced from its early version- “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments” (Teece et al. 1997). The new concept admits that (Teece, 2007) ‘enterprises with strong dynamic capabilities are intensely entrepreneurial. These capabilities can be harnessed to continuously create, extend, upgrade, protect, and keep relevant the enterprise’s unique asset base that support superior long-run business performance. Dynamic capabilities include difficult-to-replicate enterprise capabilities that require adapting to changing customer and technological opportunities as well as environment in which it is operating. Teece prescribed three dimensions of the capacities in order to ensure dynamic capability: (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise’s intangible and tangible assets (Teece, 2007)’. Firms accumulate knowledge, expertise, and skills through organizational learning that enables firms to perform their activities in improved ways which, on continuous basis, is improved in order to be competitive. Organizational learning occurs as individuals interact with each other and develop common codes of communication and coordinated search procedures.

Apparel industry is highly fashion sensitive and the demand for apparel goods is season bound (Gereffi et al. 2003), as a result creation of new knowledge regarding design, style, novelty is occurring at a rapid pace that must be continually tapping flows of knowledge (both internal and external), which the firm can use to refine the product development capabilities. Product development capability is a competitive advantage and is dependent on

the core competencies, which are determined by the dynamic capability of the firm. This dynamic capability is a resource-advantage for firms, as "resource" is coined as "anything that can be thought of as a strength or a weakness (Wernerfelt, 1984: 172).

In the context of apparel industry, dynamic capabilities theory is particularly useful lens through which we can view and measure the knowledge-absorption leading to upgradation.

3. METHODOLOGY:

Taking *interpretivism* as the epistemological position the study comprises qualitative case study method to investigate Bangladeshi Apparel firms' knowledge acquisition and upgradation process, from static efficiency to dynamic efficiency, in the Global Value Chains (GVCs). Until recently the effect of knowledge spillover on upgradation in the GVCs perspective has received little attention, thus the study undertakes case study method which takes an in-depth approach to explore the real phenomena in the industry. Yin, (2009) in this regard mentions that case study method is suitable to explore knowledge gap in an economy or industry because it facilitates exploration of phenomena related to the problem under study over time.

In addition, Sturgeon (2008) emphasised that qualitative industry research of this sort is extremely helpful in identifying supplier firms' knowledge innovation and diffusion process in GVCs framework and is providing researchers and policy-makers with a vocabulary to discuss some of their key features in industry-specific efficiency gain. Kaplinsky, et al (2001), has also emphasised firm-level in-depth interview particularly to researching innovation process within the GVCs framework. Therefore the method of this study is justified by the previous studies. The data and the information used here are taken from the first author's MSc thesis in international business at the Hull Business School in 2011.

Selection of Cases and Data Collection:

European Union and the USA are the largest buyers (markets) of Bangladeshi apparel products (the exported volume in EU- US\$ 4712.21 million and the USA -US\$ 891.61 million in 2009-10); and the knitwear and woven occupy the major share in the total export from Bangladesh (40.01% of the total export earning came from knitwear and 37.11% from woven wear in 2009-10). Therefore, we decide to take sample from each market concentration and the sub-sector. Five liaison offices of buyers from both EU and the USA,

and five supplier firms to those markets are purposively selected as the case study. Judgement of selection is rationally justified keeping research questions in mind (Table-1). Of five buyers-firms, three are European brands while the rest two are US brands. Out of five supplier-firms, DBL group is at own design and brand manufacturing stage, whilst, Envoy group is simultaneously at full package manufacturing (OEM) and own design manufacturing (ODM) stage. Other three firms belong to the category of assembling and full package manufacturing stage (see Table-4).

Following snowball technique, 60 respondents at different levels of management position from 10 sample firms have been interviewed for the study. Of total respondents, 20 from five buyer-firms (4 from each buyer firm) and 40 from supplier-firms (8 from S-K-1, 12 from S-K-2 & S-W-1, and 20 from S-K-3 and S-W-2) have been interviewed. The interviews have been conducted using open ended questionnaire. Each interview session continues for minimum 1 hour and maximum 3 hours. Interview template has been left open with broader questions and continuously modified throughout the interviews keeping research questions in mind. Both buyers and supplier firms have been selected from two major metropolitan cities: Dhaka and Chittagong—known as capital for apparel—in order for ensuring representativeness of the regions (because of regional advantages that firms may enjoy), not the cases. Considering the nature of the data, only key persons’ (who directly involved in decision-making) in the top management of buyer firms have been interviewed. Whilst respondents of the supplier firms have been interviewed from top level, mid level and front line management (e.g. directors, managers and supervisors). In addition, first author also directly observes the production plant and discusses several issues with workers and supervisors in every supplier firm.

Table-1: Brief description of the cases

Lead Firms (Buyer)				Supplier Firms				Firms Position
European Brand	Name of the Brand	American Brand	Name of the Brand		Knitwear	Name of the Firm	Woven Wear	Name of the Firm
B-1	Primark	B-4	Wall Mart		S-K-1 & S-K-2	Mermaid Apparels & Loadstar Fashion	S-W-1	Loadstar Fashion
B-2	Newlook	B-5	Levi’s		S-K-3	DBL Group	S-W-2	Envoy Group
B-3	S.O. Liver							

Reliability and Validity:

In order to ensure reliability and validity of the information, triangulation is made between in-depth interviews, direct observation, and documents with archival information; instead of relying on a single source of evidence for data. Yin (2009) argued that multiple cases study, where study of 2 to 4 or 3 to 6 firms is ideal probing similarity and/or compare findings, is suitable to overcoming selection bias that increases acceptability of findings and reduces the question of reliability of findings. In total, 10 firms have been selected for study. Chronological structure has been used for reporting and analysis of the cases, which is suitable to illustrate sequential historical development of the subject of study over time that provides the reader an uninterrupted impression and insight about the phenomenon investigated in a coherent and a logical fashion (Yin, 2009).

4. DISCUSSION OF CASE STUDIES

This section discusses the basic information of the case companies in order to provide introductory idea about the scenario and thereafter focuses on the detail discussion and analysis of the information obtained from interviews, observation and documents in line with theoretical views drawn. Detail information of case firms (both buyers and suppliers) have been presented in the Table-2 (Appendix-1). In the following sub-sections we will be discussing the lead firm's contribution to the upgradation of suppliers firms (4.1) and the challenges that supplier firms encounter in the process of upgradation (4.2).

4.1 Buyers (Lead Firms) Contributions to the Up-gradation Process:

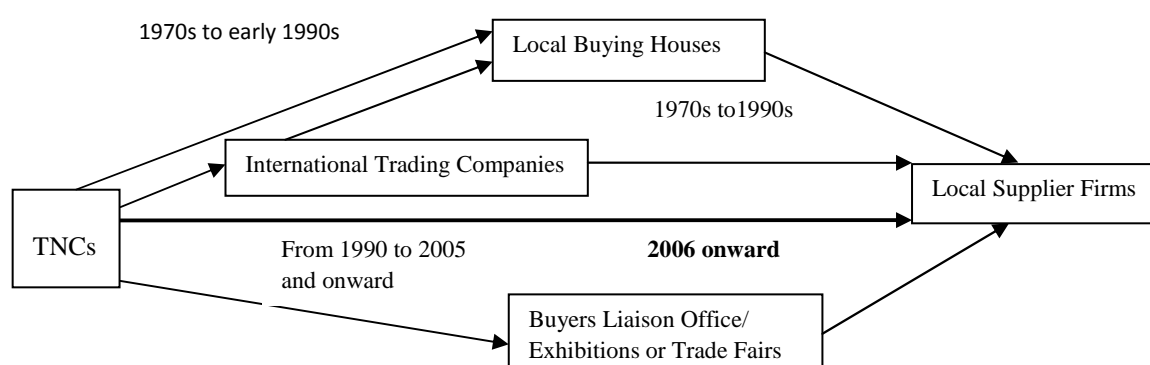
Most firms in the apparel industry in Bangladesh between 1970s and 1980s were at CMT (Cutting, Making and Trimming) stage. They used to perform only tailoring part of the production cycle. Buyers mostly preferred to contact the full package manufacturers who could take more responsibilities of the production chain than mere tailoring functions. Local buying houses' role was to liaison between manufacturers, buyers and accessories suppliers. Virtually, they had no contribution in the production chains but received commission from both local firms and inputs & accessories suppliers as an intermediary. They were dominant

on the local firms and buyers. Apart from this, buying houses had an intention to hide everything from the local firms' due to fear of losing future business, as they (local firms) could directly contact the buyers. This situation affected on the management of lead time. Inability to meet the lead time resulted in cancellation of order, which emerged as a panic to the suppliers. This hindered the usual growth of the industry in that decade.

Order processing stages were gradually improved in three phases. The 1st type (1970 to early 1990) indicates the order reception from the TNCs through local buying houses or international trading companies mostly located in Hong Kong. The 2nd type, between 1990 and 2005 and onward, order reception process has been improved than before as the buyers setup their own liaison office in the country. This process has reduced the ambiguity in the communication and removed the third party in the business. It is still being practiced in many cases. The 3rd type, 2006 and onward, started a direct communication between buyer and the supplier firm without any intermediary in the process. Mostly big firms those that are capable have this type of order reception process.

After receiving required specifications from the mother company, ordering process for outsourcing apparel goods is finally approved following a series of offer and acceptance between buyers and suppliers in terms of matching design, colour and style of the samples submitted by the suppliers as per mother companies' (lead firms) requirements. Once design and price are confirmed, buyers investigate capacity and compliance issues of the suppliers. Finally, suppliers are selected considering costs, quality and lead time. Detail ordering process in the apparel industry in Bangladesh is sketched in the following figure (Fig. 2).

Figure-2: Gradual Changes in Ordering Process in Apparel Industry in Bangladesh



Source: Developed by the authors based on interview

Case study on buyer firms:

Case-1 (B-1) *Primark*, one of the popular brands in the UK, has been maintaining liaison office in Bangladesh for the last 10 years. Primark provides cooperation to suppliers both in production and compliance issues when they have problems. Primark believes that relationship with suppliers is like a partnership to be incrementally strengthened, and for doing so- Primark has two projects: 1) healthcare and 2) cooperative partnership with suppliers. According to the country manager, *of total workers in the apparel industry around 70% are women, who suffers from several healthcare problems and feel shy to share with their male supervisors or other colleagues because of lack of awareness, conservative socio-cultural environment, religious fear, and lack of proper education. So, under healthcare project we provide generic medication services to the workers with an aim of reducing frequent absenteeism and migration of jobs that causes failure to serve order on time. Under cooperative partnership project, supplier firms are educated regarding compliance issues: social compliance, SA-8000, environmental compliance, ISO-14000, quality compliance, ISO-9000 and legal issues.*

Case-2 (B-2) *Newlook* has reputation as a high-end designer brand in Europe, and has been maintaining own office in Bangladesh since 2006. Newlook provides assistance in production, design, lead time management and investigate compliance issues seriously before giving any order. They have a third party quality inspection team who works beside suppliers' quality control team and counsels them for improving compliance system, if deficiencies are found. For frequently used accessories suppliers are advised to outsource from Newlook's designated suppliers. Regarding lead time management the Managers have pointed out weak management and lack of commitment in both management and workers, which in maximum cases are responsible for long lead time. *While we place an order we have to pay 30% of the total sum in advance while receiving nothing in return. We have to bear interests for the money paid for the duration of lead time. Therefore, incremental lead time will lead increasing costs of capital for us that will be a competitive disadvantage for suppliers (Chief Operations Officer).*

Case-3 (B-3) *S.O. Liver*, one of the famous high-end retailer brands in Germany, has been running liaison office in Bangladesh for the last six years. Before having their own office, they used to contact the suppliers by both local buying houses and international trading companies. But their unprofessional business attitude such as hiding tendency, misguiding suppliers, and providing wrong information motivated them to establish liaison office. About lead time management, Chief Operations Officer (COO) of S.O. Liver mentioned, *buyers' sensitivity to compliance issues have substantially improved local firms capacity that enables them meeting order timely. Consequently, lead time has been reduced from 120-150 days in the early 1990s to 90-100 days for woven garments and 45-60 days for knitwear in 2011.* S.O. Liver, counsels to their existing suppliers for improving their compliance management system but reluctant to train up. They rather look for competent firms so that they don't need to provide training. They believe that supplier is their partner (as external entity) in the business and thus put pressure for achieving price competitiveness and improving quality.

Case-4 (B-4) *Wall Mart* is a reputed American brand. It has been maintaining own office in Bangladesh for almost a decade and also offering schooling, healthcare, firsthand training projects as part of their social responsibilities. In 2010 Wall Mart launched a project entitled "women's empowerment" program, the Country Manager described that, *considering density of workers and their backwardness, the primary objective of the project had been determined providing workplace skills and literacy training to 2,500 female factory workers with long-term sustainable means of improving their standard of living. We arranged education and awareness session on specific issues concerned to female workers in and around workplace. This includes maternal and child health care, nutrition, hygiene and sanitation practices etc. In addition, we provided basic formal education that improve their reading writing and math skill, and also enhance the capacity of designing, sewing equipment handling and other on-the-job technical competencies.*

Case-5 (B-5) *Levi's* as one of the popular designer brands in the USA has established liaison office in Bangladesh in 2003. Levi's has education, healthcare and training projects for the workers of supplier firm to raise their capacity and improve the standard of living. They are highly sensitive about compliance issues and thus cooperate for improving suppliers capacity in both production and compliance issues. The CEO of the brand argued that *for true development of the industry, ideal phenomenon is that communication has to be simpler between buyers and suppliers avoiding all kinds of middlemen.*

He further pointed out that during the time between 1970s and 1980s, several factors were responsible for the failure to meet lead time, but lack of access to adequate information on market demand was the most important one. In order to justify his statement, he pointed out that, *political climate, socio-cultural environment, electricity and infrastructural facilities (e.g. road, air and port) were responsible for lingering orders which have been later marginally improved. But rate of order cancelation has substantially reduced compared to previous decades. It has been possible because of direct collaboration with buyers that provide suppliers with appropriate instructions and access to the necessary information on time. This enabled them to understand particular buyers' needs quickly and thereby built up their confidence to deliver orders timely.*

4.2 Supplier Firms Upgradation in GVC

Case Study on Supplier firms: Case no-1 (S-k-1) Mermaid Apparels

Mermaid is a sweater factory established in 2003. With 150 machines it has worked as a CMT firm until 2008. It started exporting indirectly since establishment through the linkage of local buying house. Now they are primarily an assembly firm but often working as CMT for local buying houses. Since the beginning Mermaid has been receiving orders via local buying houses, but meantime, they have built up direct relationship with some buyers. These buyers are continuing for the last five years because of timely delivery, quality of products and efficiency in lead time management that Mermaid has managed to maintain. The management of Mermaid, however, is highly dissatisfied with local buying houses because of their ill motive, malpractices and non-professional attitude. *Hiding tendency to share information, misguiding attitude, providing wrong information, demanding undue discounts at the end of order delivery, and showing some lame excuses are typical characteristics of the local buying houses*, as General Manager said. Mermaid has enhanced production capacity over time up to 450 machines but still it has been using manual production processes and has no compliance system. As a result they cannot receive bulk order from large buyers. According to the executive director and the production manager, *firms like us have lack in compliance issues. Because of huge costs involvement we cannot comply stringent compliance issues, as a result we work with relatively less popular buyers who are not sensitive with compliance issues.*

During fieldwork we have observed that, Mermaid takes extensive measures at several stages of the production process to ensure quality of finished products. The production manager mentioned *that we have nothing but efficiency in manufacturing, which is our competitive strength for surviving. So we do not compromise with quality.* Mermaid has no vertical linkages other than production unit, but takes responsibilities of procuring inputs and accessories. Because of substantial improvement in backward linkages in the last decade in knitwear sector, the firm tends to accept some critical orders where they can outsource majority inputs and accessories from local suppliers. They have no plan for expansion of vertical linkages. Executive Director and General Manager mentioned that, *since we can manage lead time and avail GSP facilities in EU market and get 15% cash incentives on sourcing inputs from local suppliers and another 5% as a hundred percent export oriented exporter, we have no near term plan for vertical expansion.*

The same view is shared by the senior merchandising manager of Loadstar Fashion who has both knitwear and woven wear business. They have established knitwear (S-K-2) in 1995 and have been following similar operational strategies like Mermaid; and have no near term plan for vertical expansion due to similar reasons mentioned by the prior firm. According to commercial manager and the merchandising manager of Loadstar Fashion, *expansion depends on top management's vision and commitment to the venture rather than inability of investment.* Because of manual production process and no compliance system this is no surprise that firms like them will have no order for a certain period in every year. At that point in time assembling firms have to receive orders to meet break-even to cover loss due to have certain fixed costs during production layoffs. With regard to major problems of the apparel business, executive vice president of Mermaid mentioned that, *shortage of skilled workers, efficient designers, manual production process; crises of electricity and gas are the major barriers for our development.*

Case-2 (S-K-3) Dulal Brothers Limited (DBL)

Dulal Brothers Limited (DBL) –now one of the largest and hundred percent export oriented top ranking entrepreneurial knitwear firms in the apparel industry of Bangladesh- was established with only 45 machines in 1991. The firm took massive expansion plan from 1994 to 2004. Due to have well organized backward linkages in composite, knitting-dyeing-finishing, packaging, fashion, apparel, spinning and textile, DBL has emerged as one of the leading composite knit (Table-6, appendix-1) exporters in the industry. Since establishment,

the top management were keen to qualitative development and thus they adapted modern technologies in order to ensure state-of-the-art production facilities.

Table-2: Development trajectory of DBL group

Case Firm	Year	Facilities
S-K3	1991, Establishment	Cutting, Making and Trimming (CMT) firm with 45 machines Direct communication with Newlook, UK, as contract-supplier.
	1994-2004	Vertical Expansion: Composite, Knitting-Dyeing-Finishing, Packaging, Fashion, Apparel, Spinning and Textile units Direct order collection from buyer and also via buying houses until 1996.
	1997	Direct Order Collection and also set up own buying house. State of art production facilities by technology adoption
	2000	Social & Environmental Compliance: In Healthcare, CSR, Effluent Treatment Plant etc. Captive power plant to support power supply disruption
	2005	Qualitative Development in the process: In house training, Design, Research & Development unit.
	2007	Certified in house quality inspection: Establishment of Textile Testing Services (TTSL) unit.
	2010	High emphasis on product and process development: Striving for own brand development, State of the art production facilities with vertically integrated composite knit unit.

Source: Developed on interview and official documents of the company

Apart from this, foreseeing critical success factors in the age of global competition DBL introduced social, environmental and quality compliance management systems by 2000. The group has own research and development, designing, printing, in house garments and technical training facilities and internationally recognized quality inspection certification (Table-3). All top executives of the firm including the chief management position of all departments are highly qualified with formal education from reputed foreign and local universities. They have formal training and practical knowledge related to their jobs that build up confidence and enable them to share and absorb knowledge from internal and external sources for the efficient utilization of firm's development. Directors of the group mentioned that *we value relationship with our buyers and encourage participation of our staffs from every stage in the decision making process*. Visionary leadership of the firm has encouraged managers to have higher academic qualifications and relevant practical training. As a result, firm invests into qualitative development of manpower through various forms of skill

development programmes for attaining dynamic efficiency as a means of development. Moreover, in order for developing corporate culture and maintain leadership excellence DBL under *future management training project* provides training on contemporary management practices to prospective young staffs. The group is proactive to permit researchers, industry experts and students to study several management and technical issues; and is enthusiastic to implement necessary findings that come from studies for the future development of the firm.

In 1991, DBL was established as a Cutting, Making and Trimming (CMT) firm and worked for Newlook brand, UK. According to the directors of the DBL, *receiving order from Newlook was a turning point for us because accumulated experience of working with such a reputed brand at the initial stage built our confidence and provided a benchmark to be an ideal supplier; consequently we did not have to stay for long time at assembly stage*. Those days, the group received orders via buying houses. Since the beginning, management of DBL was eager to abandon contacting local buying houses because of their dominant attitudes, tendency to hide information, excess commission, and tendency to make them permanently dependent upon buying houses for their own business interests. To overcome dependence on local buying houses DBL has been contacting buyers directly. *At the brink of full package production (OEM) stage we launch own buying house for establishing direct business networks with buyers. By the end of 2007 we have been able to establish direct relationship with our buyers. We believe that the role of liaison offices is to act like facilitator or partner* (General Manager, Production).

Buyers always tend to find suppliers who can address compliance issues and ensure timely delivery and quality of work with minimum instructions. In this case DBL has competitiveness and, thus, relationship with the partners does not give power to lead firms to dominate DBL over price issue anymore. Since local suppliers of accessories have been improving quality beside the multinational suppliers, DBL can now outsource 80-90% accessories of the total orders from local suppliers. But in previous decade they used to import nearly 90% of required accessories and fabric that increased lead time and costs. As DBL receives order directly from buyers for the whole year, they can plan in advance for required amount of raw materials. With the help of own vertical linkages, DBL imports cotton and processes them to fabric. Majority of required accessories that are outsourcing from local suppliers and vertical linkages have reduced its total lead time from 85-90 days to 45-50. The cost of product has also reduced. Moreover, it *used to setup its own internal*

deadline ahead of delivery date that enabled DBL serving the order in time. But the management and customs procedures of Chittagong port need to be modernized immediately, otherwise, because of long turnaround time of inputs and finished goods, total lead time management would be almost difficult to manage despite reduced production lead time (Production Manager).

Directors of DBL mentioned that, *based on capacity, quality, commitment, timely delivery and compliance standard buyers categorize suppliers' status as A, B and C or Platinum, Gold and Silver. We have been awarded platinum status. Because of achieving Platinum status buyers are willing to invest in the capacity enhancement projects of our firm. Whilst most firms are suffering from financing for expansion DBL has no problem of receiving finance for expansion. Since the beginning, the dynamic leadership of top executives foresaw that long-standing business relationship with the buyers could create a room for outsourcing capital from buyers. Our lead firm recommended international financing company to lend us capital for expansion. Based on trusted mutual relationship with buyers we have achieved substantial growth in all spheres of the production chains and created dynamism in management in order to maintain growth.*

Meantime, DBL has started primary functions of developing their own brand '*Atalia*' but do not want to target local market because of customers' unawareness about brand, said senior merchandising manager. But the Deputy General Manager, Administration, pointed out that, *government policy of reduced income tax facilities and cash incentives for hundred percent export oriented firms de-motivate us to target local market for own brand development.* DBL does not want to lose this opportunity of Govt. incentives as being 100% export oriented firm. However, although they could target the nearby markets for the new brands and continuously improve the quality for EU or US markets, but they are still reluctant to do so because of risk involvement with focusing on diverse market requirements in domestic and international markets. They have also a kind of embeddedness or stickiness with the order processing of foreign buyers which results in higher profit and thus own brand marketing is not perceived to be worthwhile.

In addition, incentive policy in many instances is de-motivating assembling firms (e.g. S-K-1) for qualitative upgradation. However, DBL has achieved the remarkable success by two decades, which interviewees' believe that top management's vision and team spirit among staffs account for the success. Whilst, the top management do also believe that

without integration among different departments that comes out of the team spirit development, it was quite impossible for firm to achieve this success. The group is running by hundred percent local staffs except only some foreign staffs in the printing unit. Foreign staffs are recruited on contract and need basis only in case of launching new projects, if competent staffs are not found locally. According to the director of marketing, *instead of employing full-time foreign staffs for long term employment, we invest for higher training of our local staffs and recruit foreigners on contract basis for a certain period until our own people are ready to take over those responsibilities.*

Case-3 (S-K-2 & S-W-1) Loadstar Fashion:

Loadstar Fashion is a woven wear assembling firm established in 1990s. Since establishment the firm has been receiving orders via local buying houses besides direct business network with buyers. Considering the market demand the firm has diversified its production line in 1995 by establishing knitwear factory. It has minimally improved compliance management and has no in-house training and R & D facilities. The production manager in this regard mentioned that *development of a firm is highly influenced by management vision, and our firm does not necessarily concentrate in one unit of its business. He further added that owners have other businesses besides apparel, so expansion of apparel unit may embrace sluggish growth in other businesses that motivate the owner to maintain current state of the business. It, however, only enhances production capacity as the volume of order increases.*

The firm has finishing and packaging units besides production unit. Loadstar is still working toward capacity enhancement in order for meeting market demand. According to the executive vice president, *Government is not giving permission for industrial expansion in the centre of the capital but the geographically remote areas from the capital city. The infrastructure and communication facilities at the geographically remote areas are not developed yet. In addition, for new factories to setup, Government is not providing electricity and gas anymore.*

Loadstar Fashion usually outsources fabric for both knit and woven wear from China, India and Pakistan. Outsourcing fabric from China requires 30-35 days to arrive at the factory which is 20-25 days in case of India and Pakistan, One third of total lead time (85-90 days) could be saved if sourced locally. Production manager of the firm pointed out that, *expansion*

of vertical linkages alone may fail meeting the expectation of reducing total lead time in the long run, if initiatives are not taken duly for infrastructural development and improving of power supply condition.

Despite limited vertical linkages the firm outsources inputs and accessories and try to maintain quality that buyers want. According to the Production manager, *about 80-85% of our total capacity is consumed by the large US buyers. Apart from this, we export a substantial amount to the EU market, but cannot avail GSP facility due to imported fabric that does not meet the condition for GSP. Moreover, Bangladeshi apparel goods are to pay high tariff (15.30%) in US market which is a barrier for woven sector's development,* (Executive director).

Case-4 (S-W-2) Envoy Group

Envoy Group is a second generation woven wear firm established in 1984 as an assembly firm. It has rooted a strong foothold in the industry for over two decades. Today with dyeing, washing, finishing and packaging units the firm has emerged as a group of companies representing 14 garments and apparel units. Diversification and quest for specialization has made the group pioneer in the woven sector. The chairman of the group is called a successful young entrepreneur and has been made the president of BGMEA (Bangladesh Garments Manufacturer Exporter Association) by his entrepreneurial scholarship and visionary leadership. Chief executives including chairman and directors have been educated and lived abroad for quite a long time. This helped him to develop visionary attitude. He ensured participatory management practices in the organisation. Referring to the Chairman, General Manager mentioned that *relationship to the buyers gets first priority to us.*

Table-3: Development trajectory of Envoy Group

Case Firm	Year	Facilities
S-W-2	1984, Establishment	Cutting, Making and Trimming (CMT) with one production unit. Indirect communication with buyers via local buying house and international trading companies.
	1987-1991	Direct communication with buyers.
		Expansion with Qualitative Development : Garments, Apparels, Laundry , In-house Lab, Captive Power plant
	1993-1998	Environmental and Social Compliance. Vertical expansion: Logistics and Cargo Handling, Washing plant, Effluent Treatment Plant, Dry and Finishing Machinery

1999-2000	Horizontal expansion for capability building in qualitative upgradation of the process and the firm: Investment into Bank, Freight Forwarding, Technology & Business System Solutions in Collaboration with IBM, and Adaptation of State of the Art Production Facilities
2001-2010	Capacity Enhancement and qualitative upgradation of products and process: In-house Design & Fashion Units, Production of Denim Jeans for Men, 100% Compliance and Automated Production Process, 66 Sewing lines and 22,50,000 Dozens Garment Production Capacity with Vertical Set up-Fabrics to Garments.

Source: Official documents of the company

The firm has witnessed three trajectories: *beginning, development and transition period* in the woven sector. Since establishment the firm used to work as a CMT firm for more than a decade. Since 2008 Envoy Group has been manufacturing denim fabric for jeans wears. The manufacturing unit is managed by Turkish managers, designers and engineers. Apart from this, the firm has to import substantial amount of fabric from buyers designated suppliers from China, India and Pakistan. The production manager pointed out that *because of dependence on imported fabric, poor infrastructure and port management, lead time is still too high (80-90 days), but production lead time has been considerably reduced (25-30 days) than before*. The executive vice president believed that, *expansion of backward linkages like knitwear could reduce lead time by 55-65 days. Consequently, sourcing costs and investment time were reduced which would add a significant dimension in competitiveness for global market*.

According to the General Manager, *in 1970s and 1980s buyers in many instances placed order to firms who had bare knowledge, thus helped them grow up. But buyers at present make a series of inspection regarding quality, compliance, lead time, capacity and the base of supplier firm before giving an order. He added that buyers are now unwilling to train suppliers; rather looking for trained factories that are ready for operations. We foresaw the change date back in 1995 while at the initial age of transition of the industry some young talented executives were trained abroad so that they could take over new ventures. Besides, we recruited required number of foreign experts at different departments on need basis*.

About local firm's management efficiency, the production manager's view is - *the average performance at management level is quite good. At factory level, people who started career as worker now have promoted as production manager, quality control manager etc. Their technical knowledge is praiseworthy but communication skills are very poor. Sometimes they cannot even understand instructions properly, where language (English) is a*

prime barrier which is quite impossible to develop because of their poor academic background.

5. ANALYSIS OF THE CASES

The above discussions lead to the summary that upgradation of supplier firms' in GVC is influenced by many factors in general such as management vision, backward linkages, compliance regulations imposed by buyers and international organisations, lead time management skill, Government incentives for 100% exporting, direct business relation with buyers, and industry condition (availability of inputs and accessories locally) as well as international regulations with regard to quota. By contrast, there are some factors which affect negatively on upgradation process and the expansion of the firm; such as inadequate supply of electricity and gas, Government incentives on 100% export oriented products that eventually discourages the development of own brand and marketing in the local and international markets (low opportunity cost), and poor infrastructure of the seaport etc. Considering the factors mentioned in two categories along with the firm's internal resources (intangible and tangible), it can be summarised that the apparel firms' upgradation is driven or constrained by the major three factors: first, *lead firms and international regulations*, which is the foreign buyers' requirements, mode and degree of cooperation with supplier firms, nature of controlling and coordination that determine the extent to which supplier firms maintain communication with foreign buyers, and the international regulations that stimulate demand condition as well as the code of conduct for production and management of apparel industry. Second, *national institutional and sectoral condition*, which is mostly driven by the state commitment in industrial development and risk sharing, supporting physical infrastructure, technological and educational infrastructure that produces qualified managers and technical experts including designers, labour condition- level of skills and education, availability of capital from the bank/capital market for upgradation, and the supporting industry condition as well as nature of cooperation and coordination among the firms in the sector. Third, is the *Supplier firm condition*, which is mostly the resource based condition, and the dynamic capability of the firm that drives them to be competitive with the changes of technology and the nature of market.

In this study our focus is not the first two factors but the third, *supplier firms' condition* in which the focus is given on the most important factor that drives them to upgrade their position in the global value chain.

Table-4: Factors that affect upgradation:- case-wise information

Firm	Nature of Internationalisation	Nature of upgradation	R&D	Mgt. vision	Communication with buyers	Training	Mgt. compliance	Upgradation Stage
Mermaid (S-K-1)	Born global (Indirect to direct export) (3 yrs.)	Gradual	No	Low visionary	Direct relation	No	No	Assembly & OEM
Dulal Brothers (DBL) (S-K-3)	Born Global (4 yrs) (Direct export)	Gradual	Yes (with Own brand)	Highly visionary (Foreign educated owners)	Direct and close interactive relation	In-house training	Yes	ODM and Own Brand- ATALIA
Loadstar Fashion (S-K-2 & S-W-2)	Born global (Indirect to direct export)(4 yrs.)	Gradual	No	Low visionary	Indirect and direct communication	No	Partial	Assembly and OEM
Envoy group (S-W-2)	Born global (Indirect to direct export) (5 yrs.)	Gradual	Yes	Highly visionary (Foreign educated owners)	Direct and close relation	Trained employees abroad, and recruit experienced people.	Yes	OEM and ODM

The data (Table 4) reveal that all supplier firms investigated here are having similar nature of internationalisation soon after their establishment, which is in line with the concept of born global (Knight and Cavusgil 1996). The reason of being born global nature might be primarily the quota hopping TNCs that created opportunities for supplier firms, but those chances have been presumably exploited by the supplier firms through their local and international networks, entrepreneurial capacity and the motivations for internationalisation. Some of the entrepreneurs of the case companies (S-K-3 and S-W-2) had been educated and stayed in the western countries that enabled them to exploit international network for those chances emerged. However, since our paper's focus is to unfold the black box of the upgradation, it gives clear indication that the upgradation is very much step-wise and gradual (table 2 &3). This gradual development tends to be path dependent and moves forward as long as it accumulates knowledge from different sources and enhances the dynamic capability to adapt to changes through upgradation in order to earn competitive advantage.

It indicates (Table-5) that all case firms S-K-1, S-K-3, S-K-2, S-W-1 and S-W-2 are of big in size but are not necessarily conditioned by age of the firm.

Table-5: Age and size of the firm

	Mermaid S-K-1	Loadstar (Knit) S-K-2	DBL S-K-3	Loadstar (Woven) S-W-1	Envoy S-W-2
Year of establishment	2003	1995	1991	1990	1984
No. Of People	600	3,580	20, 000	8, 865	15, 000

If we look at DBL (S-K-3) and Envoy (S-W-2) firms' trajectories (table 2 &3) we can find a gradual upgradation and growth from small operation to the present stage, which is similar to others (S-K-2, S-K-1 and S-W-1). But they are far behind from the first two in terms of many indicators like own R&D, in-house training, direct linkage with buyers, compliance issues and quality certification etc. These factors are the effect of the top management visionary and dynamic capability that continuously strives to upgrade its competitive advantage in order to better sustain in the market. They have upgraded in many ways: such as firm's capacity building through vertical and horizontal expansion- as evident in most of the firms for process and product upgradation - which are seen in S-W-2 and S-K-3 (Table 4). One in which focus is given on capacity building (mainly quantitative) while the other one is focusing on capability- more into the qualitative in addition to quantitative.

Results of the case studies (Table-3) reveal that S-K-3 (DBL) is the most successful firm among the five cases in terms of quality of upgradation. It has almost developed its brand 'ATALIA' which is in the process of launching. Information from the interview indicate that the direct interactive communication with buyers and the dynamic visionary leadership that continuously focus on the improvement of quality in process, people, production and the product help upgrading the firm. The second most successful firm in terms of quality of upgradation is the Envoy group (S-W-2), who has almost the same characteristics that help upgradation, but has not been able to develop its own brand yet.

Vertically integrated production facilities, R&D, and the continuous training of people have tremendously contributed over the ability of firms to absorb knowledge from the external sources including foreign buyers (due to direct communication), and utilise them in developing process for upgradation. Ability to utilise the absorbed knowledge, and to do so- focusing on continuous development of competitive advantage, is the dynamic capability that both the firms have and continuously use. As a result, both the firms belong to the *own design and brand development stage in the GVC* rather than *assembling and own equipment manufacturing stage*, like the three other firms (Table 3). On the contrary, advantages

described above that the most successful firms possess are missing for those of other three firms; S-K-1, S-K-2, S-W-1, that still belong to the lower stage of the GVC. The most visible reason of this is that, the top management does not have close interactive communication with foreign buyers, which considerably reduces the knowledge spillover. Also the entrepreneurs do not intend to improve the qualitative upgradation in process, people and product, rather interested to expand the capacity of production. They have other businesses than apparel, as a result reluctant for qualitative development. Some of the firms point to the infrastructural problems, unavailability of power supply and contraction of quota facilities that hinder their growth, but they tend to be applicable for all the case-firms in which two of them have already been successful.

The entire case-firms hint about lead-time issue that drives them to upgrade their vertical linkage and affect on cost mechanism in order to be competitive, but that does not necessarily mean the qualitative upgradation to own design or brand manufacturing stage. Rather it gives higher opportunity to receive more orders of diversified products, and which is not related to knowledge spillover but resource spillover and capacity building. This is necessary but does not necessarily mean the qualitative upgradation of the firm. Adoption of compliance management practice and development of R&D unit stimulate continuous human development with in-house training opportunity for employees that cause qualitative upgradation. Therefore, People inside the firm are in a position to absorb knowledge while working with the foreign counterparts and use them as necessary for firm's development. However, they are all the matter of visionary leadership of the firm who ensures it at the end.

Turning to the buyer's perspective, it focuses on *resources of the firm, dynamic leadership, and learning* effect that considerably affect on upgradation of the firms in GVC. It is evident that the close interaction between foreign buyers and supplier-firm enhances the amount of knowledge spillover, and it is essentially dependent on the dynamic leadership of the firm to ensure trust between parties for close interaction of two parties. Buyers do not often willing to share knowledge for such upgradation of local firms that encroaches on their core competences (Humphrey et al. 2002). However, the development of trust and relationship that supplier firm creates makes it possible to what extent buyer will agree to work closely with supplier.

Successful full-package firms are close to own design and brand development (e.g. S-K-3), while assembling firms are still struggling for order reception (e.g. S-k-1, S-K-2 & s-W-

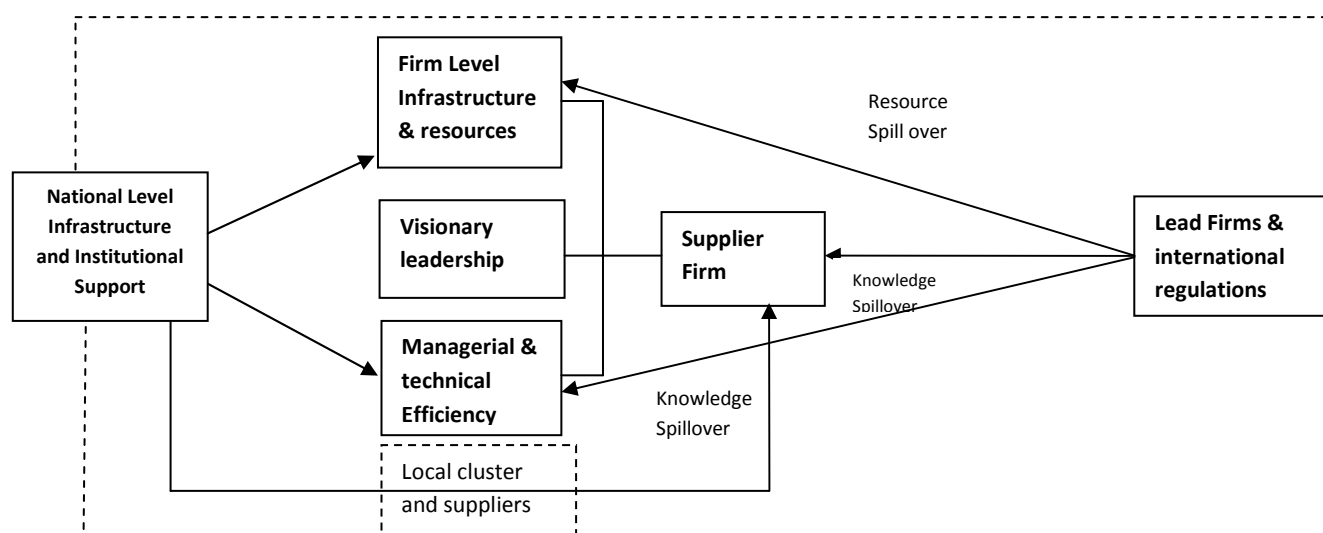
1). However, the dynamic capability and visionary leadership has been always leveraging supplying-firms in the upgradation process, although this phenomenon is not highlighted by Bair & Gereffi (2003) in their study.

6. FINDINGS AND CONCLUSION

Based on the discussion and analysis of the case studies we propose a framework below (Fig. 4) that will provide an appropriate insight about the major factors affecting knowledge and resource spillover from lead firms to supplier firms in Ready-Made-Garments industry in Bangladesh, which might be helpful for the policy makers while designing the upgrading strategies for the industry in the GVCs.

Figure-4: Present scenario of knowledge and resource spillover from Lead firms to Supplier firms

External Factors (e.g. social, political, legal, technological etc.) ok



Source: Developed by the authors

Primarily four fundamental factors namely *national level infrastructure and institutional support*, *firm level infrastructure and resources* (tangible), *Visionary leadership*, and *managerial & technical efficiency* (intangible) (Fig. 4) directly affect the local firms upstream (manufacturing related) and downstream activities as well as upgradation. Ability and attractiveness to receive orders depend on level of availability of these primary factors which corresponds to the resource based view of the firms in general (Wernerfelt, 1984). Whilst firm level resources (both tangible and intangible) and the ability of organizational learning by knowledge acquisition from external sources develop enduring long term competitiveness (Cohen et al. 1990 & Zahra et al. 2002), which is ultimately leveraged through the dynamic capability of the firm such as visionary leadership, efficient management

at all levels and highly qualified designers or technical people. The extent to which firm is able to absorb knowledge from the lead firms and transform them into useful efficiency and performance is led by the visionary leadership of the firm, which is very much unique and hard to imitate. In addition to knowledge spillover, often resource in the form of finance and technical support also come from the lead firms as resource spillover. This resource spillover depends on the relationship between lead firm and supplier firm and the dynamism of the leadership of supplier firm, which at a certain point is determined by the degree of requirement and dependency of the lead firm. In the process of knowledge spillover, local cluster, raw material and accessories suppliers and foreign buyer's agents also contribute in addition to lead firms.

Going back to the history, in 1970s apparel industry in Bangladesh had very limited existence of these factors but had only abundant cheap labour as static efficiency that lead firms attempted to exploit. But now the relationship between local firms and the TNCs turns into partnership at relational and modular stage in the GVCs. At this stage TNCs in many instances (e.g. DBL group) are willing to invest in local firms to enhance their capacity and the upgradation of qualitative standard so long as they are confident about the dynamic capabilities (entrepreneurial) of the firms, which come from the nature and the degree of relationship between firms.

When lead firms come with any critical order to supplier-firms or need more volume of supply, they assist supplier firms building their capacity, thus local firms absorb knowledge and resources from them that contribute to their learning and developing capabilities over time which eventually help transforming static efficiency into dynamic efficiency.

The accumulated learning of local firms' finally contributes to upgrading their position in GVCs; as a result TNCs leave an indirect impact on the development of national infrastructure and upgradation of the industry. But how fast local firms can move from low value added upstream activities to more value added downstream activities depend on cluster-wise development as well as individual firm's learning and absorption capacity, leadership capability, management efficiency, Government policies, infrastructural development and level of technology adaptation.

One interesting finding on the incentive mechanism for apparel sector has forced us to rethink that on the one hand it stimulates the volume of export; on the other hand, it

negatively affects the launching of new brands in the local market. Thus, the incentives policy for the upgradation of the industry needs to be revised and should consider ‘Brand’ exporting from Bangladesh as special reward-worthy category than only 100% exporting.

7. FUTURE RESEARCH DIRECTION:

Opportunity for future research includes investigation of the role of major stakeholders (BGMEA, BKMEA, Local buying houses and Concern Ministries of the Government) in the upgradation process. In addition, some of the successful firms’ at full package stage are trying to develop own brand, which is a new phenomenon and can be researched that to what extent their effort is constrained or accelerated by the present condition of knowledge spillover and dynamic capability.

8. IMPLICATIONS FOR POLICY MAKERS

Findings from the study can be useful for the institutions working on the capacity building and upgradation of the Apparel industry in Bangladesh including the Government. The insight from this study can also be useful for the firms aspiring to move their status from one stage to the upper stage in the GVCs. The study will also be supporting for the researchers working on upgradation of the industry and the firms from developing countries.

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APPENDICES:

Appendix-1:

Table-2: Basic information about the cases (buyers and suppliers)

Name of Case Firms	Code used	Markets from or concentration in	Type of venture	Turnover-2010 (yearly)	Year of establishment [For TNC-country-liaison office]	Total no. of People [For TNC-country-liaison office]	Technological orientation	Top Management qualification and visionary
Primark	B-1	UK	Retail Chain	-----	2000	85	Medium	Highly qualified
Newlook	B-2	UK	Chain	-----	2006	70	Medium - High	Highly qualified
S.O. Liver	B-3	Germany	Designer Brand	-----	2004	110	High tech	Highly qualified
Wall Mart	B-4	USA	Retail Chain	-----	2001	185	Medium-High	Highly qualified
Levi's	B-5	USA	Designer Brand	-----	2003	160	High tech	Highly qualified
Mermaid Apparels	S-K-1	EU & USA	Knitwear	40 million US dollar	2003	600	Low	Medium and focuses on short term gain
Loadstar Fashion	S-K-2	USA & EU	Knitwear	30 million US dollar	1995	3,580	Medium	Medium and focuses on short term gain
DBL Group	S-K-3	EU, USA & Canada	Knitwear	150 million US dollar	1991	20,000	High	Highly qualified and focuses on sustainable gain
Loadstar Fashion	S-W-1	USA & EU	Woven wear	65 million US dollar	1990	8,865	Medium	Medium and focuses on short term gain
Envoy Group	S-W-2	USA & EU	Woven wear	100 million US dollar	1984	15,000	High	Highly qualified and focuses on long term gain

Note: Doted line (-----) indicates limited access to the data

2: Interview Templates

Interview Template for Buyers

1. How long your brand has been maintaining own liaison office in Bangladesh?
2. Would you explain why liaison office is effective instead of agents?
3. Would you explain order placement procedure to the local supplier firms?
4. Do you provide detail instructions while placing an order?
5. Do you recommend suppliers for inputs or local firms contact them in their capacity?
6. What sort of cooperation do you provide to supplier firms?
7. What kind of relationship do you have with local firms (dominant or like a partner)?
8. How do you perceive the learning rate of local firms in improving their position?
9. What issues are most important from buyer view in selecting suppliers?
10. Do you co-operate suppliers firms to address any unusual situation (price increase of inputs)?
11. As a buyer which areas do you think should get the highest priority in improving industry's position internationally?

Interview Template for Managers of Supplier Firms :

Questions for Assembling Firms

1. Year of establishment of the firm?
2. What were activities performed at the initial years of operation (CMT)?
3. Does the firm still perform similar activities?
4. How many years does/did the firm do those activities?
5. How does/did the firm receive order at that stage?
6. How does your firm procure inputs (e.g. threads, fabric etc.)?
7. Do buyers supply detail production instruction to the firm?
8. Who are the major buyers for your firm?
9. What type of problems do a firm face at assembly stage?
10. How many years was the firm taken moving to the next phase (Depending on development of the firm)?
11. What type of problem does the firm encounter at the current stage?

Questions for Full Package Manufacturing Firms

1. Year of establishment of the firm?
2. What type of activities did the firm at assembly stage?
3. How many years was the firm at that stage?
4. How did the firm receive order at that stage?
5. How does the firm receive order from buyers now?
6. What type of problem did the firm encounter at assembly stage?
7. Do you have own buying house for orders collection from buyers or receiving via external buying houses?
8. Does your firm receive detail instructions from buyers while receiving order?
9. Do you mention detail about the types of instruction receive from the buyer (Descriptive or Codified)?
10. Do you have in house designing facilities?
11. Do you have in house R & D?
12. Do you have in house training facilities?
13. Does the firm recruit foreign experts? If yes, would you explain why the firm employs them and for how long they are employed?
14. How many years were/are the firm at full package production?
15. Does the firm produce inputs for production or outsource?
16. If outsource, how does your firm procure inputs for production (e.g. fabric, button, thread etc): locally or internationally? (Bair & Gereffi, 2003)
17. If from local sources, how does your firm contact them (collect information about them)?
18. Who are the major buyers for your firm?

19. Does the firm have standard certification(s) (e.g. ISO-9001, 14000)?
20. To your view, what is the significance of having these certifications?
21. Do you believe that management practice is an important factor for firm's development?
22. Do TNCs cooperate to address any uncertain situation (e.g. increase of workers payment by the govt., increasing cost of inputs in international market etc)?
23. In which category (A, B, C or Platinum, Gold, Silver) your firm is according to the categorization of the buyers?
24. Do buyers (TNCs) provide sufficient cooperation to improve supplier firm's position from one category to the next?
25. Who undertake responsibilities of quality inspection buyers or your firm?
26. Do buyers invest into any project for future expansion of the firm?
27. Does the firm approve staffs participation in any training locally and/or internationally?
28. Do you think that buyers are dominant to the firm in terms of pricing, environmental standard etc?
29. Does the firm use fully automated production technology or have any manual process?
30. How much is backward integration important improving firm's competitiveness?
31. How does the firm manage lead time?
32. Do you find government initiatives and supports are sufficient for the development of the industry?
33. What are the major barriers do you find diversifying market?
34. What are the major barriers do you find diversifying product?

Questions for OBM Stage

1. Does your firm produce own brands?
If yes, is that own brand or using third party brand by licensing?
2. If no, does the firm have any plan to develop own brand?
3. If yes, what is the plan for developing own brand?
4. To your view, what are the major barriers for own brand development?
5. How those barriers can be overcome?
6. Do you think demand in local market can be significant for own brand development? If yes why or no then why?

Interview Template for Directors of Supplier Firms

1. Would you explain the success history of your firm?
2. What are the challenges our firms facing in own brand development?
3. What are the challenges our firms facing in own design manufacturing?
4. Knitwear products are not exporting in the USA as much as in EU, would you mention what are the reasons behind?
5. What prospects do you find for the apparel industry of Bangladesh amid intensive competition stems from globalization effect?
6. What are the major barriers do you find for the development of the industry?
7. Do you think government support and policies are sufficient for the development of the industry?